Amendments to the Specification:

After the title, please insert the following subheading and paragraph:

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is entitled to the benefit of and incorporates by reference essential subject matter disclosed in International Patent Application No. PCT/FR2004/002938 filed on November 18, 2004 and French Patent Application No. 03 14183 filed on December 3, 2003.

Before paragraph **[0014]**, please amend the following subheading:

~~OBJECT OF THE INVENTION~~ **SUMMARY OF THE INVENTION**

Before paragraph [0016] please delete the following subheading:

~~GENERAL DEFINITION OF THE INVENTION~~

Please amend the following paragraphs as follows:

[0035] ~~Figure 3 is a~~ Figures 3a1, 3a2, 3b, 3c and 3a' are diagrammatic plan ~~view~~ views showing the successive steps of the drilling method of the invention as implemented on a single lens;

[0036] ~~Figure 4 is a~~ Figures 4a1, 4a2, 4b, 4c and 4a' are diagrammatic plan ~~view~~ views analogous to the ~~view~~ views of Figure 3, showing an implementation of the method of the invention on the right lens and on the left lens of the spectacles to be made; and

Before paragraph [0038] please amend the following subheading:

DETAILED DESCRIPTION OF THE PREFERRED ~~EMBODIMENT OF THE INVENTION~~ EMBODIMENTS

Please amend the following paragraphs as follows:

[0038] Figure 1 shows an assembly referenced 10 for drilling holes in lenses. The assembly 10 includes a bed 11 that is essentially horizontal and that carries a numerically-controlled drill 12. The numerically-controlled drill 12 is, in this example, made up of ~~two~~ three subassemblies 13.1, 13.2, 13.3, subassembly 13.3

contains an electric drive motor (not shown) whose outlet shaft is coupled to a chuck 14 serving to fasten a drill tool 15 such as a milling cutter. The drill tool is driven in rotation about its axis 16 by associated motorized drive means. In this example, the numerically-controlled drill 12 includes a bottom block ~~13.1~~ 13.4 which is mounted on the bed 11 to be movable along two coordinate directions X and Y, and which underlies a tool support ~~13.3~~ 13.5 mounted on a vertically-movable column ~~13.2~~13.6. The tool support ~~13.3~~ 13.5 is thus movable in controlled manner in a coordinate direction Z that is essentially vertical, in addition to the coordinate directions X and Y because it is mounted on the block ~~13.1~~13.4.

[0043] Two channel-section guideways 25, 25 can be seen that are laid on their sides so that they are open facing each other, and each guideway includes a rack 26. A cross-bar 27 whose ends carry pinions (not shown in Figure 1), each of which meshes with a respective rack, serves to perform the X,Y positioning of the support block 51 by means of a straddling upside-down channel-section member 52 that fits snugly over the cross-bar 27. The X,Y movements of the support block 51 are represented diagrammatically in this example by double-headed arrows respectively 102 and 101.

[0044] Figure 1 also shows other means of function that is essential in the present invention. These means are constituted by a reference pointer generally constituted by an assembly 30, and of position in the X,Y plane that is known to the numerically-controlled drill 12. In this example, the reference pointer 30 comprises a vertical column 31 fastened to the bed 11 (directly to the plate 20 in this example), and a slide 32 that is mounted to move vertically on said column, said ~~column~~ slide having at least one side edge 33 constituted by a tapering rib that extends vertically. In this example, one side edge 33 is provided on either side of the slide 32, said rib preferably being made of a rigid plastics material such as nylon or the like, so that it is both precise and also does not run any risk of chipping or more generally damaging the edge of the lens that is brought into abutment against said rib, when implementing the procedure that is described below in more detail.

[0047] The slide 32 can be held in the high position on its vertical column by mechanical or electromagnetic means, which are not shown. For example, said

means can be constituted by a retractable spring-loaded ball or by a magnet, or by any other equivalent means. The slide 32 can be caused to go from the high position to the low position by mechanical, electrical, or electromagnetic means which act in association with the drill tool being lowered, or, in a variant, manually by acting directly on the slide so as to push it down along its column. A simple manner of providing automatic control for controlling the downward movement of the slide 32 consists in providing a vertical rod (not shown) that is fastened to the tool support ~~13.3~~ 13.5 and that comes into abutment against the slide 32 on lowering the drill tool, so that the reference pointer is automatically retracted when the drill tool reaches a working zone. In a variant, it is possible to use any system based on a cable or on an electro-magnet for the purpose of automatically controlling moving the slide downwards.

[0049] Figure 2 also shows the lens support 50 in more detail, which lens support is arranged to hold a lens V in an essentially horizontal plane. The lens support 50 is thus in the form of a block 51 having declutchable magnetic locking, and which can be held stationary in any position on the plate 20, whose top face is made of a ferromagnetic material. A control knob 53 can turn, as represented diagrammatically by the double-headed arrow 105 between two positions corresponding respectively to the block 51 being held stationary in position on the top face of the plate 20, or to the magnetic block being released so as to enable the block 51 to slide freely over the top face of the plate 20. Figure 2 also shows the straddling upside-down channel-section member 52 which is secured rigidly to the block 51, and which passes snugly and with as little friction as possible over the cross-bar 27. In Figure 2, it is possible to see one end pinion 28 of the cross-bar, which pinion meshes with the associated rack 26 disposed inside the channel-section member 25 laid on its side. Movement in a direction parallel to the direction of the racks ~~25~~ 26 corresponds to movement along the Y-axis, represented diagrammatically by the double-headed arrow 101, and transverse movement, along the axis of the cross-bar 27, corresponds to movement along the X-axis, represented diagrammatically by the double-headed arrow 102. The support 50 is thus secured to the plate 20 so as to move in two mutually orthogonal directions 101, 102 forming an X, Y coordinate system.

[0052] Figure 3a1 ~~firstly~~ shows a first step ~~referenced a1)~~, during which a lens V is put in place, one edge of the lens having been marked at a particular point referenced PR which is a reference point for the machining sequences that are subsequently to be performed on the lens. Naturally, the lens V is fastened to its magnetic-type support (not shown). The support is mounted to move in sliding abutment on the plate 20 along the X-axis and along the Y axis, thereby making it possible to move the lens V progressively until the reference point PR is brought exactly to the tip of the rib 33 forming the reference pointer, as shown at ~~a2)~~Figure 3a2. Thus, in this step, the lens V is positioned by moving it in a plane that is substantially perpendicular to the axis 16 of the drill tool, relative to the reference pointer ~~33~~30 of position in said plane that is known to the numerically-controlled drill 12, until the reference point PR (pre-marked on the edge of the lens V) is brought into abutment against the reference pointer 30, 33, whereupon said lens in held stationary in that position. The lens is held stationary very simply, by turning the control knob 53 on the magnetic support 50.

[0053] In the next step shown in Figure 3b~~b)~~, the drill tool 15 (not shown) is then brought towards the lens V which is still held stationary, and the reference pointer 30, 33 is retracted so that it leaves clear the abutment zone of the lens, as represented diagrammatically by the reference pointer being shown in chain-dotted lines. The drill tool 15 can then travel over any pre-established desired path relative to the lens whose position is known by means of the reference point PR.

[0054] In the step shown in Figure 3c~~c)~~, the drill tool 15 is controlled so that it performs pre-programmed machining sequences, by using the position of the reference point PR of the lens V as the zero point for said sequences.

[0055] The machining sequences are preferably taken from a memory containing a plurality of sequences, each of the sequences including a plurality of notches and/or holes that can be through or non-through, and that are arranged in a predetermined pattern. In this example, said sequences concern the nose zone ZN of the lens V in question. Various patterns M1 to M6 are shown, each corresponding to types of machining that are commonly encountered with this type of frame. The

various patterns are shown diagrammatically in Figure 3c, in which the following patterns can be seen:

pattern M1: a through hole P1 and a through notch E1;

pattern M2: two through holes P2.1, P2.2 that are substantially superposed;

pattern M3: two through holes P3.1, P3.2 that are substantially in line horizontally;

pattern M4: a through hole L4 that is elongate in a substantially vertical direction;

pattern M5: a through hole P5 and a non-through notch E5; and

pattern M6: non-through surface machining P6 following a pattern for technical and/or attractive appearance purposes.

[0057] Once the holes in the nose region ZN have been formed, it is possible to resume the same sequence of operations for forming the holes in the temple zone ZT of the same lens. This is shown diagrammatically as step ~~a')~~Figure 3a', during which the support for the lens V is moved again in the X,Y plane until another reference point PR' pre-marked on the opposite edge of the lens V is brought into abutment against the reference pointer 30, 33, whereupon the lens is again held stationary in this position. The step shown in Figure 3b~~b)~~ of moving the drill tool towards or away from the reference pointer, and then the step shown in Figure 3c~~c)~~ of controlling the preprogrammed sequences for machining holes and/or notches then make it possible to form the holes desired for the temple zone ZT.

[0058] An advantageous variant of the above-described method is described below with reference to ~~Figure 4~~ Figures 4a1-4a'. This variant makes it possible to work directly on the right lens and the left lens of the spectacles to be formed.

[0059] As shown diagrammatically at Figure 4a1~~a1)~~, the right lens VD and the left lens VG fastened to their respective magnetic supports are firstly disposed in abutment on the plate 20. In this example, the reference pointer 30 must be provided with two projecting abutment ribs 33, one on either side of the axis of the stationary column 31.

[0060] Each support is then moved so as to bring the reference point PR of each lens VD or VG against an abutment side edge 33, as shown at Figure 3a2~~a2)~~. Then, steps analogous to the above-described steps follow, with, Figure 3b~~at b)~~, the double reference pointer 33 being retracted as the drill tool approaches, then, at Figure 3c~~c)~~ the drill tool being controlled so as to perform the programmed machining sequences on each lens, by using the respective position of the reference point PR as a zero point for said sequences.

[0063] Thus, as shown at Figure 3c~~-c)~~, the desired holes and / or notches are formed in the right and the left lenses VD and VG. In this example, they are constituted by a hole P1 and by a through notch E1.

[0064] In order to machine the temple zones of each of the lenses, it is possible to use the above-described positioning means advantageously merely by swapping over the two lens supports, in order to bring the free edges of the temple zones into abutment against the abutment side zones 33. This is shown ~~at step a')~~ in Figure 4a' in which it can be seen that the right and the left lenses have been swapped over.

[0065] After said step ~~a')~~shown in Figure 4a', the method resumes as described above, with the double reference pointer being retracted, and the pre-programmed machining sequences being controlled for each of the lenses, in the temple zone thereof.

[0069] In these figures, there can be seen the horizontal plate 20 of the bed and the tool support ~~13.3~~13.5 supporting the drill tool 15. Two lens supports 50 whose structures remain unchanged can also be seen. The main change lies in the presence of one or two (in this example, two) support plates 41 that can be tilted at an adjustable angle of inclination. By tilting laterally the bearing surface on which the lens support 50 rests, it is possible to change the angle of inclination of the lens fastened to said support, so that the face to be machined has a tangential plane that, locally, is substantially horizontal.

Please add the following new paragraph **[0077]:**

[0077] While the present invention has been illustrated and described with respect to a particular embodiment thereof, it should be appreciated by those of ordinary skill in the art that various modifications to this invention may be made without departing from the spirit and scope of the present invention.